

Note on Australian Finches of the Genus *Poëphila*.

By Captain WILLIAM E. ARMIT, F.L.S.

[Read November 1, 1877.\*]

AT a meeting of the Queensland Philosophical Society, held in Brisbane on the 10th of August, 1876, Mr. S. Diggles read some "Notes on new and rare Specimens of Australian Birds."

After a few remarks, Mr. Diggles proceeds to correct an error into which he asserts our great author, Mr. Gould, has fallen in relation to a beautiful genus of Finches (*Poëphila*)—one which he (Mr. Gould) had named after his own wife, *P. Gouldiæ*, turning out to be the female of another species, viz. *P. mirabilis*, Hom. & Jacq.

Mr. Diggles adduces the following testimonies in support of this assertion:—

First. The specimens which he had examined were forwarded to him by Mr. Waterhouse, of the Adelaide Museum, who had received them from Mr. Stapleton, the latter gentleman having procured them at Palmerston, in the Northern territory of South Australia.

Mr. Stapleton thus writes concerning these birds:—"This species (*P. Gouldiæ*, Gould) and *P. mirabilis* are gregarious the most part of the year. They associate in flocks of about equal numbers, live upon the same food, are precisely similar in habits, have the same unmusical note, and agree well together. I am inclined to think they are simply varieties, and that the slight difference in colour is regulated by some law or cause which prevents any further alteration."

Secondly. A gentleman writing from Charters' Towers (near Townsville) mentions its occurrence at that place, but states

\* [For the author's interests and the Society's credit it is right to state, that while the former forwarded his MS. at the end of March 1877, it did not reach Burlington House, unfortunately, until the day after the final Meeting, June 1877, and, in consequence, had to lie over until the commencement of the Winter Session, then taking its place in publication according to order. Meanwhile there has appeared a paper in the Proceedings of the Linnean Society of New South Wales, vol. ii. pt. 1, p. 70, "Some further Remarks on *Poëphila Gouldiæ* and *P. mirabilis*, Hom. & Jacq.," by Mr. E. Pierson Ramsay, F.L.S., in which this gentleman discusses the question of their specific distinction, and particularly refers to information received from Captain Armit. The present communication, however, deals with the latter's evidence more fully than that referred to, having precedence of publication for the reasons given.—EDITOR.]

that it is rare, and encloses a newspaper of date 18th March (1876?), from which it appears that it has been reared at that place.

A pair of these *P. Gouldiæ*, which he calls "Variegated Bullfinch," built their nest in the wheel of the whip-pole of the "Martin-Lyons" reef, and became so accustomed to the working of the whip, that they used to perch on the rope when ascending, and on reaching the level of the nest would hop into it. The male and one of the young effected their escape; but the female and six fully fledged young ones were secured and taken to Mr. J. H. Rutherford (since deceased), forming a valuable addition to that gentleman's collection of natural curiosities.

Mr. Rutherford states "that both sexes are alike, but that the male has a red and the female a black head, the plumage of the young birds being a sober drab."

Thirdly. That the late Mr. Coxen was also of his (Mr. Diggles's) opinion.

Now Mr. Diggles brings forward no proof of the Palmerston specimens having been sexed by dissection, which is, it will be conceded, the only method to arrive at a definite conclusion in a matter of doubtful sex.

Mr. Rutherford, on the other hand, distinctly states that the male has a red head and the female a black head; and although he had no opportunity of sexing the red-headed bird (which, it is stated, escaped), he seems to have done so in the case of the black-headed bird in his possession; otherwise it is hard to understand how he could arrive at such knowledge.

Mr. Diggles never saw either of the above species in a state of nature, and therefore could not study their nidification or habits.

The following facts will, I think, prove that *P. Gouldiæ* is a distinct species from *P. mirabilis*, breeding true red-headed males in contradistinction to the black-headed ones of the latter.

In January 1876 I shot a female of *P. Gouldiæ* at Dunrobin, near Georgetown. There were only two birds; and, unfortunately, the male (red-headed) escaped. This specimen, which I carefully sexed, I sent to my friend Mr. E. Pierson Ramsay, F.L.S., C.M.Z.S., Curator of the Australian Museum, Sydney, who kindly sent me the names of this species and also of *P. mirabilis*, which were at that time both quite new to me.

In his letter, Mr. Ramsay requested me to look up these species, and, if possible, discover whether they were distinct. I did

not, however, come across any more specimens of either species until the 16th of February last, when I had the good fortune to see a flock of twelve *P. mirabilis* close to the native-police barracks. I secured three males and one female, and could easily have shot every one of the flock; but noticing a female carrying a long piece of dry grass, I at once desisted, being most anxious to watch their nidification and to secure the full-fledged young.

All these birds had black heads, the female being easily distinguishable by the plumage being much less bright than that of the male bird—the line of metallic blue which divides the black from the purple on the throat being clearly defined in the male, whereas in a female now before me the black throat-feathers are continued to the breast, being only tipped with blue, the breast is a pale peach-bloom colour, and not of the same rich plum as that of the male, and, lastly, the elongated central tail-feathers are much shorter in the female. In the specimen now before me these feathers do not exceed the other tail-feathers more than half an inch.

The elongated feathers of three males now before me measure respectively  $2\frac{1}{2}$ ,  $2\frac{3}{8}$ , and  $2\frac{3}{4}$  inches in length. The two central tail-feathers of my female specimen measure  $1\frac{7}{8}$  inch in length. The two outer tail-feathers, one on each side of the elongated ones, have the shafts slightly lengthened,  $\frac{1}{8}$  of an inch.

I have five male specimens of *P. Gouldiæ* before me at this moment, all of which were shot by myself since the 16th of February last.

None of this series differ in even the slightest degree in colouring, and only very little in the length of the central tail-feathers.

The length of these is as follows:—No. 1,  $2\frac{1}{8}$  inches; No. 2,  $2\frac{3}{4}$  inches; No. 3,  $2\frac{1}{8}$  inches; No. 4,  $2\frac{1}{16}$  inches; No. 5,  $1\frac{1}{2}$  inch (not in full plumage). Two females:—No. 1, 2 inches; No. 2, 2 inches.

I find, on comparing the females of both species together, that the blue line between the black feathers of the throat and the pale peach-bloom ones of the breast is more distinct in *P. Gouldiæ* than in *P. mirabilis*; and, if possible, *P. Gouldiæ* is a less highly coloured bird than *P. mirabilis*. Mr. Gould omitted the long central tail-feathers in his *P. Gouldiæ*, which, however, are constant. The next two feathers from the two central ones in *P. Gouldiæ* have not the shafts quite so much elongated as in *P. mirabilis* in my specimens.

I have thus distinct evidence of sex in five specimens (♂) of *P.*

*mirabilis* and three females (♀), having sent two males and two females to Mr. Ramsay, of Sydney, and Mr. T. A. Gulliver, Normanton.

In every one of the above cases the males had a black head.

Of *P. Gouldiæ* I have five red-headed birds, all of which I have proved, by dissection, to be males, and two females having black heads, also similarly sexed.

I regret that I have been unable to discover a nest of either of these lovely little birds, although I have devoted much time in searching for them. I still hope, however, to be able to secure young full-fledged birds and to rear them to maturity, and thus solve this point.

From the evidence which I have now laid before you I think you will agree with me that *Poëphila Gouldiæ* is a distinct species from *Poëphila mirabilis*, and that Mr. Diggles's theory "that the red-headed bird is the female of *P. mirabilis*" must fall to the ground, being incorrect. I hope, ere long, to be able to send the Society more evidence on the subject.

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Report on the Insecta (including *Arachnida*) collected by Captain FEILDEN and Mr. HART between the Parallels of 78° and 83° North Latitude, during the recent Arctic Expedition. By ROBERT M'LACHLAN, F.R.S., F.L.S., &c.

[Read November 15, 1877.]

THIS paper concerns the Arthropoda (excluding Crustacea\*) of the Voyage of the 'Alert' and 'Discovery' towards the North Pole in the years 1875-1876. The collections were chiefly formed by Capt. H. W. Feilden, R.A., who was attached to the 'Alert' as naturalist; but several interesting contributions resulted from the researches of Mr. Hart, who occupied a similar position on board the 'Discovery.' Neither of these gentlemen was an entomologist. Capt. Feilden had already made for himself a reputation as an ornithologist; Mr. Hart is specially a botanist. The latter could scarcely have been expected to form any extensive zoological collections, a province that more especially pertained to his colleague; and I am sure all will agree that the duties could

\* A Report on the Crustacea collected by the Expedition, by Mr. E. J. Miers, of the British Museum, has appeared in the 'Annals and Magazine of Natural History,' ser. 4, vol. xx, pp. 52-66, 96-110 (1877).